

CONSERVATION SCIENCE

ACTION PLAN SUMMARY

CORDELL BANK NATIONAL MARINE SANCTUARY

PROGRAM STATEMENT

Although characterization, monitoring, and research have been the cornerstone of Cordell Bank National Marine Sanctuary (CBNMS) activities, a formalized long-term plan needs to be developed to coordinate these efforts. All three activities will continue to be a high priority, and CBNMS staff will integrate the findings of these projects into education and outreach programs. Two specific areas the sanctuary will focus on are: 1) development of a coordinated and integrated characterization and research program for CBNMS; and 2) development and implementation of a long-term monitoring plan.

OUR GOAL

The sanctuary's goal is to increase knowledge and understanding of the Cordell Bank ecosystem; develop research programs to identify and address specific resource management issues; and develop monitoring programs to understand long-term status and trends to guide management.



Photo: CBNMS

BACKGROUND INFORMATION

Cordell Bank is an intriguing site due to its high biological diversity and its remote location. The sanctuary is important to researchers, and investigation has been taking place since its discovery. The Bank is a difficult place to study on a regular basis in large part because of unpredictable and harsh offshore oceanic conditions. The first extensive study of Cordell Bank was conducted from 1977 to 1987 by Cordell Expeditions. The researchers documented life on the Bank in over 3000 photographs, considerable film and video footage, and a large collection of biological specimens.

Remotely operated vehicles (ROV) and the Delta submersible are used to characterize the benthic biota and habitats in CBNMS. In September 2001, sanctuary biologists and collaborating partners conducted initial surveys of the Bank, characterizing habitats and documenting species distribution and abundance. The sanctuary has continued these studies on an annual basis to increase the understanding of this unique environment and to better manage the sanctuary's resources. In 2004, the Sanctuary initiated a monthly monitoring program to gain a better understanding of the variability of the Cordell Bank pelagic ecosystem. Weather and conditions permitting, single day monitoring cruises over Cordell Bank are conducted once a month on the sanctuary vessel.

THE JOINT MANAGEMENT PLAN REVIEW (JMPR)

Conservation Science is one of the action plans in the CBNMS Draft Management Plan (DMP). The DMP includes five action plans that, once finalized, will guide sanctuary management for the next five years. The plan is a revision of the original management plan, developed when the sanctuary was designated in 1989, and is focused on how best to understand and protect the sanctuary's resources. The National Marine Sanctuary Program (NMSP) is updating the management plans for Cordell Bank, Gulf of the Farallones, and Monterey Bay national marine sanctuaries in what is known as the Joint Management Plan Review.



CORDELL BANK NATIONAL MARINE SANCTUARY

CBNMS protects an area of 397 square nautical miles (526 square miles) off the northern California coast. The sanctuary is an area of special significance due to its unique geological and oceanic features that create conditions which support extraordinarily diverse and abundant marine life.

CBNMS is located in one of the world's four major coastal upwelling systems. The combination of oceanic conditions and undersea topography provides for a highly productive environment in a discrete, well-defined area (Schmieder, 1982a). The main feature of the sanctuary is Cordell Bank, an offshore granite bank located on the edge of the continental shelf. The vertical relief and hard substrate of the Bank provides benthic habitat with near-shore characteristics in an open ocean environment, 20 nautical miles from shore.



ACTION PLAN

The sanctuary's Conservation Science Action Plan was developed jointly with a variety of stakeholders and partners and includes, but is not limited to, the following components:

- Prepare an oceanographic climatology report. To fully characterize the sanctuary, a complete and detailed understanding of the oceanographic and atmospheric conditions in and around the sanctuary is needed.
- Map and characterize CBNMS' habitats. A habitat map will provide important baseline information for management.
- Characterize the soft-bottom epifaunal* and infaunal* communities of CBNMS.

**Epifauna are animals that live in contact with the sea bottom, either moving freely over the substrate or attached to it.*

**Infauna are animals that live within or burrow through substrate.*

- Collect, inventory, and catalog new and previously unsorted Cordell Bank benthic invertebrate specimens.
- Survey available museum collections, data archives, and literature indexing services for Cordell Bank specimens, data, and publications.
- Better understand the function and variability of pelagic ecosystems.
- Continue monitoring fish and invertebrate assemblages in relation to the fine-scale habitat on and adjacent to the Bank portion of CBNMS. Identify locations and quantity of anthropogenic impacts, including derelict gear and other marine debris.
- Manage and store data in easily accessible and secure formats and locations.

TO GET INVOLVED

CBNMS welcomes your ideas about important resource management issues in the sanctuary. A Draft Management Plan and Draft Environmental Impact Statement are scheduled for release to the public in 2006. Following their release, hearings will be held in several locations throughout the region to gather public comment. Written comments will be accepted as well. To find out about public hearings, or how to submit written comments, please visit our website at <http://sanctuaries.noaa.gov/jointplan>.